

L8 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:869620 CAPLUS  
 DN 137:354703  
 TI Hydrolysis, hydrogenation and hydrogenolysis process for lactose  
 conversion into polyols  
 IN Elliott, Douglas Charles  
 PA Battelle Memorial Institute, USA  
 SO U.S. Pat. Appl. Publ., 7 pp.  
 CODEN: USXXCO  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002169344	A1	20021114	US 2001-851678	20010508
	WO 2002090601	A2	20021114	WO 2002-US14728	20020507
	WO 2002090601	A3	20030327		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRAI US 2001-851678 A 20010508

AB A process for converting lactose into polyols includes: (a) **hydrolyzing lactose** to produce a hydrolyzate that includes at least one monosaccharide (e.g., glucose and galactose); (b) subsequently hydrogenating the hydrolyzate to produce an alditol-containing intermediate composition; and (c) hydrogenolyzing the alditol-containing intermediate composition to produce at least one polyol (e.g., ethylene glycol, propylene glycol, glycerol).

L8 ANSWER 2 OF 15 USPATFULL on STN  
 AN 2004:103684 USPATFULL  
 TI Cold-active beta-galactosidase, the process for its preparation and the use thereof  
 IN Hoyoux, Anne, Tilff, BELGIUM  
 Fran.cedilla.ois, Jean-Marie, Soheit-Tinlot, BELGIUM  
 Dubois, Phillip, Liege, BELGIUM  
 Baise, Etienne, Binche, BELGIUM  
 Jennes, Isabell, Charneux, BELGIUM  
 Genicot, Sabine, Roscoff, FRANCE  
 Gerday, Charles, Esneux, BELGIUM  
 PA Universite de Liege, Liege, BELGIUM (non-U.S. corporation)  
 PI US 6727084 B1 20040427  
 AI US 2000-501136 20000209 (9)  
 PRAI BE 1999-152 19991124  
 US 1999-143114P 19990709 (60)  
 DT Utility  
 FS GRANTED  
 EXNAM Primary Examiner: Hutson, Richard  
 LREP Venable LLP, Kinberg, Robert, Axelrod, Nancy J.  
 CLMN Number of Claims: 24  
 ECL Exemplary Claim: 1  
 DRWN 7 Drawing Figure(s); 4 Drawing Page(s)  
 LN.CNT 1037

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A purified cold-active beta galactosidase enzyme, specific for lactose, having a stable enzymatic activity at a temperature below 8° C.  
 In the presence of lactose, a purified cold-active beta galactosidase

enzyme, specific for lactose, having a stable enzymatic activity at a temperature ranging between 0° C. and 50° C.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 15 USPATFULL on STN  
AN 2003:187920 USPATFULL  
TI Novel thermostable isomerase and use hereof, in particular for producing tagatose  
IN Hansen, Ole C., Vaerloose, DENMARK  
Jorgensen, Flemming, Lyngby, DENMARK  
Stougaard, Peter, Skibby, DENMARK  
Bertelsen, Hans, Videbaek, DENMARK  
Bottcher, Karen, Kibaek, DENMARK  
Christensen, Hans Jorgen Singel, Herning, DENMARK  
Eriknauer, Kristian, Odder, DENMARK  
PI US 2003129710 A1 20030710  
AI US 2002-193896 A1 20020715 (10)  
RLI Continuation-in-part of Ser. No. US 2001-386209, filed on 16 Jul 2001, PENDING  
PRAI US 2001-305155P 20010716 (60)  
DT Utility  
FS APPLICATION  
LREP Finnegan, Henderson, Farabow,, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC, 20005-3315  
CLMN Number of Claims: 35  
ECL Exemplary Claim: 1  
DRWN 8 Drawing Page(s)  
LN.CNT 2155

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel L-arabinose isomerase active enzyme and its corresponding gene, derived from a thermophilic source are provided. The enzyme is suitable for the production of D-tagatose, a useful low-calorie sweetener. The enzyme may be obtained from a *Thermoanaerobacter* species such as *Thermoanaerobacter mathranii*.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 15 USPATFULL on STN  
AN 2003:120114 USPATFULL  
TI Nucleic acids of *aspergillus fumigatus* encoding industrial enzymes and methods of use  
IN Jiang, Bo, Montreal, CANADA  
Storms, Reginald, Beaconsfield, CANADA  
Roemer, Terry, Montreal, CANADA  
Bussey, Howard, Westmount, CANADA  
PI US 2003082595 A1 20030501  
AI US 2002-213990 A1 20020805 (10)  
PRAI US 2001-309870P 20010803 (60)  
DT Utility  
FS APPLICATION  
LREP PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711  
CLMN Number of Claims: 45  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Page(s)  
LN.CNT 8033

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides nucleotide sequences of *Aspergillus fumigatus* that encode proteins which exhibit enzyme activities. Vectors, expression constructs, and host cells comprising the nucleotide sequences of the enzyme genes are also provided. The invention further provides methods for producing the enzymes, and methods for modifying the enzymes in order to improve their desirable characteristics. The activities displayed by the enzymes of the invention include those of a

tannase, cellulase, glucose oxidase, glucoamylase, phytase,  $\beta$ -galactosidases, invertase, lipase,  $\alpha$ -amylase, laccase, polygalacturonase or xylanase. The enzymes of the invention can be used in a variety of industrial processes. Enzymatically active compositions in various forms as well as antibodies to the enzymes and fragments thereof, are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 5 OF 15 USPATFULL on STN  
AN 2003:51095 USPATFULL  
TI Sensor for analyzing components of fluids  
IN Delwiche, Michael J., Winters, CA, UNITED STATES  
Jenkins, Daniel M., Davis, CA, UNITED STATES  
DePeters, Edward J., Davis, CA, UNITED STATES  
BonDurant, Robert H., Davis, CA, UNITED STATES  
PA REGENTS OF THE UNIVERSITY OF CALIFORNIA, Oakland, CA (U.S. corporation)  
PI US 2003036052 A1 20030220  
AI US 2002-209455 A1 20020730 (10)  
RLI Continuation-in-part of Ser. No. US 2001-839939, filed on 19 Apr 2001,  
PENDING Division of Ser. No. US 1999-349814, filed on 9 Jul 1999,  
GRANTED, Pat. No. US 6287851  
DT Utility  
FS APPLICATION  
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH  
FLOOR, SAN FRANCISCO, CA, 94111-3834  
CLMN Number of Claims: 19  
ECL Exemplary Claim: 1  
DRWN 19 Drawing Page(s)  
LN.CNT 1138

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides methods and sensors for assaying components of fluid samples by measuring pressure changes. In particular, the invention provides methods to assay for components in fluids with or without the aid of enzymatic reactions. The invention also provides a modified sensor that has an immersible pressure monitor/gas-containing portion unit and is capable of detecting pressure changes with higher sensitivity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 6 OF 15 USPATFULL on STN  
AN 1999:22223 USPATFULL  
TI Decarboxylation process for 2-ketoaldonic acids  
IN Fleche, Guy, 15 Rue Gambetta, 59190 Hazebrouck, France  
Duflot, Pierrick, 773 Rue de la neuve voie, 62136 Lacouture, France  
PI US 5872247 19990216  
AI US 1997-864780 19970529 (8)  
PRAI FR 1996-6808 19960603  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Kight, John; Assistant Examiner: Lee, Howard C.  
LREP Henderson & Sturm  
CLMN Number of Claims: 12  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 333

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Catalytic decarboxylation process for 2-ketoaldonic acids by nickel ions characterized in that an aqueous solution of a 2-ketoaldonic acid is put in contact with a resin carrying vinylpyridine groups.

The process allows in particular ribulose, xylulose and erythrulose to be easily obtained.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 7 OF 15 USPATFULL on STN  
AN 85:10528 USPATFULL  
TI Use of whey-derived products as cheese flavoring agents or enhancers  
IN Crossman, Tommy L., Corning, NY, United States  
PA Corning Glass Works, Corning, NY, United States (U.S. corporation)  
PI US 4500549 19850219  
AI US 1983-472735 19830307 (6)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Hunter, Jeanette  
LREP Voyce, B. D.  
CLMN Number of Claims: 17  
ECL Exemplary Claim: 1  
DRWN No Drawings  
LN.CNT 563

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Cheese flavoring agents and cheese flavor enhancers are provided in the form of enzyme-modified, lactose-hydrolyzed whey or whey fractions. The products have a flavor profile characteristic of aged cheese and a flavor intensity sufficient to serve as the sole source of cheese flavor or as a cheese flavor enhancer in a variety of food products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d 18 bib abs 9-15

L8 ANSWER 9 OF 15 USPATFULL on STN  
AN 85:2073 USPATFULL  
TI Use of hydrolyzed whey products in fermented sausages  
IN Casella, Linda J., Ithaca, NY, United States  
PA Corning Glass Works, Corning, NY, United States (U.S. corporation)  
PI US 4492712 19850108  
AI US 1983-542704 19831017 (6)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Corbin, Arthur L.  
LREP Voyce, B. D.  
CLMN Number of Claims: 16  
ECL Exemplary Claim: 1  
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)  
LN.CNT 616

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An extender for fermented sausage products based on hydrolyzed whey or hydrolyzed whey fractions is provided. The extender is equivalent to, but less expensive than, extenders used in the prior art, such as nonfat dry milk, and exhibits functional properties in the finished product, including the properties of reducing the product's pH and water activity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 10 OF 15 USPATFULL on STN  
AN 84:60921 USPATFULL  
TI Use of lactose-hydrolyzed whey in chewing gum  
IN Bakal, Abraham I., Parsippany, NJ, United States  
Crossman, Tommy L., Corning, NY, United States  
PA Corning Glass Works, Corning, NY, United States (U.S. corporation)  
PI US 4479969 19841030  
AI US 1983-472734 19830307 (6)  
DT Utility

FS        Granted  
EXNAM    Primary Examiner: Hunter, Jeanette M.  
LREP     Voyce, B. D., Maycock, W. E.  
CLMN     Number of Claims: 18  
ECL     Exemplary Claim: 1  
DRWN     No Drawings  
LN.CNT   654  
AB       Lactose-hydrolyzed whey or whey fractions are used in chewing gum to replace all or a part of the soluble sweetner, emulsifier and plasticizer components of conventional chewing gum formulations. The use of these materials allows the production of softer chewing gums which are not sticky and of athletic chewing gums which promote salivation. The use of the disclosed whey-based materials results in lower costs for chewing gum products, as well as providing a means to utilize the abundant food value of whey.

L8       ANSWER 11 OF 15    USPATFULL on STN  
AN       83:46606    USPATFULL  
TI       Process for **hydrolyzing lactose** with immobilized lactose  
IN       Baret, Jean-Luc A. G., Moret, France  
         Dohan, Luc A., Fontainebleau, France  
PA       Corning Glass Works, Corning, NY, United States (U.S. corporation)  
PI       US 4409247                    19831011  
AI       US 1981-269945               19810603 (6)  
PRAI     FR 1980-12616               19800606

DT       Utility  
FS       Granted  
EXNAM    Primary Examiner: Naff, David M.  
LREP     Maycock, W. E.  
CLMN     Number of Claims: 14  
ECL     Exemplary Claim: 1  
DRWN     No Drawings  
LN.CNT   820

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB       Lactose in whey is hydrolyzed with an immobilized lactase by a process which involves heating the whey to a temperature of from about 45° to about 90° C. for at least about 15 seconds, centrifuging the heated whey while it is still warm, contacting the centrifuged whey with an immobilized lactase, cleaning the immobilized lactase, and disinfecting the immobilized lactase. Preferably, lactase is immobilized on an inorganic support, and cleaning and disinfecting are carried out respectively by contacting the immobilized lactase with a solution of protease and with a solution of substituted diethylenetriamine.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8       ANSWER 12 OF 15    USPATFULL on STN  
AN       83:29124    USPATFULL  
TI       Method for disinfecting immobilized enzymes  
IN       Baret, Jean-Luc A. G., Moret, France  
PA       Corning Glass Works, Corning, NY, United States (U.S. corporation)  
PI       US 4393138                    19830712  
AI       US 1980-206099               19801112 (6)  
PRAI     FR 1979-30598               19791212  
DT       Utility  
FS       Granted  
EXNAM    Primary Examiner: Naff, David M.  
LREP     Maycock, W. E.  
CLMN     Number of Claims: 4  
ECL     Exemplary Claim: 1  
DRWN     No Drawings

LN.CNT 461

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disinfecting of immobilized enzymes is carried out by contacting the immobilized enzymes with a dilute aqueous solution of at least one substituted diethylenetriamine at a concentration and for a period of time which is sufficient to substantially kill the contaminating microorganisms without significant deleterious effects on the immobilized enzymes. The substituted diethylenetriamine is preferably dioctyldiethylenetriamine or a mixture of dioctyldiethylenetriamine and trioctyldiethylenetriamine.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 13 OF 15 USPATFULL on STN

AN 81:17853 USPATFULL

TI Synthesis of ascorbic acid from lactose

IN Danehy, James P., South Bend, IN, United States

PA Bernard Wolnak and Associates, Inc., Chicago, IL, United States (U.S. corporation)

PI US 4259443 19810331

AI US 1979-47937 19790612 (6)

RLI Continuation-in-part of Ser. No. US 1979-9251, filed on 5 Feb 1979, now abandoned

DT Utility

FS Granted

EXNAM Primary Examiner: Kepplinger, Esther M.

LREP Friedman, Eugene F.

CLMN Number of Claims: 15

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 450

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of synthesizing vitamin C (ascorbic acid) directly from the hydrolysis products of lactose. Lactose, economically obtained from whey, undergoes hydrolysis with a warm aqueous slurry of lactase to produce D-galactose and D-glucose. Preparing the methyl glycosides of these two sugars protects a labile C-O linkage during the oxidation of the sugars to D-galacturonic acid and D-glucuronic acid. The mixture of these acids, after the removal of the methyl group through hydrolysis, undergoes reduction with gaseous hydrogen in the presence of an Adams **catalyst** or Raney nickel to produce a mixture of L-gulonic acid and L-galactonic acid. Removing the water from these acids forces their conversion into the corresponding lactones. Because of the applicable rate constants, adding water to the lactones does not result in their rapid reconversion to the acids. Accordingly, they can then undergo oxidation, in the presence of an enzyme obtained from pea seeds, to L-ascorbic acid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 14 OF 15 USPATFULL on STN

AN 79:25575 USPATFULL

TI Process for the conversion of lactose into monosaccharides and derivatives thereof

IN Dahlgren, Stig A., Lidings, Sweden

PA Carbos AG, Switzerland (non-U.S. corporation)

PI US 4156076 19790522

AI US 1976-672314 19760331 (5)

DT Utility

FS Granted

EXNAM Primary Examiner: Brown, Johnnie R.

LREP Hueschen, Gordon W.

CLMN Number of Claims: 20

ECL Exemplary Claim: 17

DRWN No Drawings

LN.CNT 258

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a process for the conversion of lactose into useful monocarbohydrates, comprising the steps of oxidatively hydrolyzing a lactose solution to form galactose and gluconic acid, and separating these two constituents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 15 OF 15 USPATFULL on STN

AN 78:2096 USPATFULL

TI Process for the hydrolysis of lactose

IN Rowe, Melvin Charles, Poole, England

PA Portals Water Treatment Limited, Whitchurch, England (non-U.S. corporation)

PI US 4067748 19780110

AI US 1976-727925 19760929 (5)

PRAI GB 1975-40418 19751002

DT Utility

FS Granted

EXNAM Primary Examiner: Marantz, Sidney

LREP Rosen, Lawrence, Berry, E. Janet

CLMN Number of Claims: 9

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 285

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Lactose, especially derived from whey, is efficiently hydrolysed to glucose and galactose by contact in water with a solid, insoluble, strongly acidic ion exchange resin based on certain cross-linked polystyrenes or certain carbohydrates. The products are valuable in food manufacture.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

(FILE 'HOME' ENTERED AT 14:17:32 ON 28 JUN 2004)

FILE 'CAPLUS, USPATFULL, CA, CAOLD' ENTERED AT 14:17:56 ON 28 JUN 2004

L1	109 S HYDROLYZING LACTOSE
L2	1 S L1 AND SOLID ACID CATALYST
L3	1 S L1 AND ACID CATALYST
L4	0 S L3 NOT L2
L5	17 S L1 AND CATALYST
L6	15 DUP REM L5 (2 DUPLICATES REMOVED)
L7	1 S L6 NOT 2
L8	15 S L6 NOT L2